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| 09/467,965 | 12/21/1999 | JEA YONG YOO | 2950-0149P | 3040 |

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| EXAMINER | |
|---|---|
| TRAN, THAI Q | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2616 | |

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/467,965 | YOO ET AL. | |
| | Examiner | Art Unit | |
| | Thai Tran | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *06 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Oct. 06, 2004 has been entered.

### *Response to Arguments*

2. Applicant's arguments filed Oct. 06, 2004 have been fully considered but they are not persuasive.

In re pages 12-17, applicants argue that Saiki fails to teach a combination of steps in a method for creating and recording search information for recorded digital data streams, including creating and recording index information for *pointing to the start portion of each stream object, which corresponds to the first stream object unit of each stream object as recited in independent claim 1 as amended*.

In response, the examiner respectfully disagrees. Saeki et al discloses in col. 6, lines 2-3 that

> "**Each VOB** is composed of **a plurality of Video Object Units (VOBUs)**",

in col. 9, lines 19-30 that

> "The title search pointers 811, 812,...are pointers which indicate **PGCs (or PGC information) corresponding to the titles**. For example, the title search pointer 811 indicates PGC information 831. Here, each PGC is formed of a plurality of arbitrary AV data sections of arbitrary VOBs, the sections being

logically linked. Each piece of PGC information shows a logical relationship between the plurality of arbitrary AV data sections of arbitrary VOBs.

The AV file management table 820 shows relationships between the reproduction points (times) and the storage positions of the AV files (i.e. VOBs). The table includes as many pieces of **VOB information (VOB information 821, 822,...)** as the number of VOBs", and

in col. 19, lines 18-38 that

"In FIG. 26, the AV data reproducing unit 130 refers to the AV data management file held by the control data management unit 107 for the sent tile name **(or title search pointer number) to obtain the PGC information and the VOB information (step 281)**. Also, the AV data reproducing unit 130 issues the OPEN command specifying an AV file shown in the obtained **VOB information to the file system unit 102 (step 282)**.

The AV data reproducing unit 130 then reproduces **the title A** by repeating a loop ranging from the step 283 to 290 the same number of times as the number of cells set in the PGC information.

More specifically, the AV data reproducing unit 130 converts the start and end times of the cell to the start address (sector address) and the end address respectively by referring to the time map information (step 284). The AV data reproducing unit 130 issues the READ command specifying the times to the file system unit 102. This allows the disc reading unit 101 to start reading the data section in **the VOB (corresponding to the cell) between the start and end addresses"**.

From the above passages, it is noted that the claimed index information for *pointing to the start portion of each stream object, which corresponds to the first stream object unit of each stream object as recited in independent claim 1 as amended* is anticipated by the PGC information and the VOB information of Saeki et al because the PGC information and the VOB information are used to search for the VOB composing a plurality of VOBUs.

In re pages 18-20, applicants state that claims 2-20 are allowable for the same reasons as discussed in claim 1 above.

In response, as discussed with respect to claim 1 above, Saeki et al does indeed discloses all the claimed limitations of claim 1.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 14-17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Saeki et al (6,078,727).

Regarding claim 1, Saeki et al discloses recording a received digital data stream by grouping the received digital data stream into stream object units, with each stream object unit having a predetermined length (fig. 7; VOBs are considered to be stream objects because the data in the VOBs is used to create an MPEG stream); creating and recording time information for each stream object unit, the time information being used to search for the stream object units (fig. 11, col. 17, line 45 – col. 18, line 30); and creating and recording index information for pointing to the start position of each stream object, which corresponds to the first stream object unit of each stream objective (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38).

Regarding claim 2, Saeki et al discloses that the time information is the length of each stream object unit, expressed in terms of a count value counted at a constant internal (col. 9, line 42 – col. 10, line 52).

Regarding claims 3 and 7, Saeki et al discloses that the count value is a number incremented by 1 every the constant interval (fig. 9). For example, each time map is separated according to the TMU or the constant interval, and it is clearly shown that the time map numbers are incremented by 1.

Regarding claims 4 and 8, Saeki et al discloses that the index information is in the order of the time information of a time information entry related to each stream object (fig. 9, col. 17, line 57 – col. 19, line 5).

Regarding claim 5 and 9, Saeki et al discloses that the index information is the order on the time information of a time information entry corresponding to a first stream object unit of each stream object (fig. 9).

Regarding claim 6, Saeki et al discloses recording time information on the count value counted at a constant interval (TMU) for each stream object unit (fig. 9), with each stream object unit consisting of transport streams (because the VOBs contain data used to produce a MPEG stream, which can be transported, the data is considered to be transport streams); and recording index information for pointing to the start position of each stream object, which corresponds to the first stream object unit of each stream object (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38).

Regarding claim 10, Saeki et al discloses reading search time information for stream object units (fig. 9), each stream object unit consisting of a plurality of digital transport streams (fig. 10) and the search time information being the length of each stream object unit, expressed in terms of a count value counted at a constant interval (col. 9, line 42 – col. 10, line 52); detecting a stream object containing a requested search time by comparing a requested search time with start time information of each stream object consisting of a predetermined number of stream objects, the start time information having been recorded for accessing the stream objects (col. 19, lines 30-38); reading index information pointing to the start position of each stream object, which corresponds to a first stream object unit of each stream object (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38); and accessing a time information entry corresponding to the read index information (fig. 9).

The limitations of claim 14 were discussed in the art rejection of claim 8. Please refer to the art rejection of claim 8.

Regarding claim 15, Saeki et al discloses a recording means (fig. 15) for recording a received digital data stream by grouping the received digital data stream into stream object unit (fig. 7) and for creating and recording time information for each stream object unit for searching for the recorded stream object units (fig. 9), with each stream object unit having a predetermined length (col. 9, line 42 – col. 10, line 52); and control means for creating index information for pointing to the start position of each stream object, which corresponds to a first stream object unit of each stream object

(PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38).

The limitations of claim 16 were discussed in the art rejection of claim 2. Please refer to the art rejection of claim 2.

The limitations of claim 17 were discussed in the art rejection of claim 8. Please refer to the art rejection of claim 8.

Regarding claim 19, Saeki et al discloses a data formatter (2, fig. 15) to group a received digital data stream into stream object units (fig. 7) and to create time information for each stream object unit for searching the stream object unit individually (fig. 9), wherein each stream object unit has a predetermined length (col. 9, line 42 – col. 10, line 52); a data recorder to record the digital data stream grouped by and the time information created by the data formatter (fig. 15); and a controller to create index information for pointing to the start position of each stream object, which corresponds to a first steam object unit of each stream object (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 11-13, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al in view of Moriyama et al (6,006,004).

Regarding claims 11-13, Saeki et al does not disclose accumulating search time from the accessed time information entry to a time information entry corresponding to the stream object unit containing the requested search time; comparing the accumulated search time with the requested search time and determines the position corresponding to the requested search time based on the comparison result; and reproducing the recorded digital data stream from the determined position.

Moriyama et al teaches comparing time elapsed information with the requested search time and determines the position corresponding to the requested search time based on the comparison result; and reproducing the recorded digital data stream from the determined position (col. 27, line 20 – col. 28, line 42). The time elapse information of Moriyama et al represents the elapsed time. To obtain equivalent information using the time map tables of Saeki et al time must accumulated from the accessed time information entry to a time entry corresponding to the requested search time because the time map tables do not indicate elapsed time.

It would have been highly desirable to accumulate search time; compare the time to the requested search time; and reproduce from the determined position so that the user can perform a time search operation, thereby allowing a user to jump to specific times in the video data.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the above described steps in the device of Saeki et al.

Regarding claim 18, Saeki et al discloses reading means (fig. 15) for reading search time information (fig. 9) for stream object units, each stream object unit

consisting of a plurality of digital transport stream (fig. 10) and the search time information being the length of each stream object unit expressed in terms of a count value counted at a constant interval (col. 9, line 42 – col. 10, line 52); and that the information on the start time of each stream object has been recorded for accessing stream objects (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38 and col. 18, line 14 – col. 19, line 5). However, Saeki et al does not disclose comparing a requested search time with the start time and controlling the reading means to reproduce according to the detected address.

Moriyama et al teaches a controlling means for detecting a stream object containing a requested search time by comparing the requested search time with the start time of each stream object consisting of one or more stream object units, and moving the data reproducing position of the reading means to access a time information entry corresponding to the read index information (col. 27, line 20 – col. 28, line 42). Since the time map table of Saeki et al indicate the address of stream objects in relation to time information, controlling the reading means to read the index information pointing to the location on the search time information for the start position of the detected stream object would have to be done.

It would have been highly desirable to have a controlling means so that the time information can be used to perform a time search operation, thereby allowing a user to jump to specific times in the video data.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have a controlling means in the device of Saeki et al.

Regarding claim 20, Saeki et al discloses a pickup (fig. 15) to read recorded stream object units (fig. 7) and search time information for the stream object units (fig. 9), each stream object unit consisting of a plurality of digital transport streams (fig. 10) and the search time information being the length of each stream object unit expressed in terms of a count value counted at a constant interval (col. 9, line 42 – col. 10, line 52), wherein information on the start time of each stream object has been recorded for accessing stream objects (col. 18, line 14 – col. 19, line 5) and a controller to control said pickup to read index information pointing to the start position of each stream object, which corresponds to a first stream object unit of each stream object read by said pickup for the start position of the stream object (PGC information and the VOB information disclosed in col. 9, lines 19-30 and in col. 19, lines 18-38). However, Saeki et al does not disclose a data analyzer to detect a stream object read by said pickup containing a requested search time by comparing the requested search time with start time of each stream object consisting of one or more stream object units and that the controller moves the data reproducing position of said pickup to access a time information entry corresponding to the index information read by said pickup, wherein information on the start time of each stream object has been recorded for accessing stream objects.

Moriyama et al teaches a data analyzer to detect a stream object read by the pickup containing a requested search time by comparing the requested search time with start time of each stream object consisting of one or more stream object units; and to move the data reproducing position of the pickup to access a time information entry

corresponding to the index information read by the pickup (col. 27, line 20 – col. 28, line 42). Since the time map of Saeki et al indicates the position in relation to time information, a controller would have to control the pickup to read the index information pointing to the location on the search time information read by the pickup for the start position of the stream object detected by the data analyzer.

It would have been highly desirable to have a data analyzer and a control so that the time search operation could be performed, thereby allowing a user to jump to specific times in the video data.

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to have a data analyzer and a controller in the device of Seki et al.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Tran whose telephone number is (703) 305-4725. The examiner can normally be reached on Mon. to Friday, 8:00 AM to 5:30 PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).